

REMARKS

As a preliminary matter, Applicants request clarification of the status of Claim 2. More specifically, paragraph 5 of the Office Action states that Claim 2 would be allowed if amended into independent form and to overcome the §112 rejection. However, paragraph 4 states that Claim 2 is rejected under §103. Applicants believe that Claim 2 was included in the §103 rejection by mistake (because there is no specific discussion of Claim 2, as there was for the other rejected claims). However, clarification of the status of Claim 2 is respectfully requested.

Claims 15 and 16 and 1-8 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully traverse this rejection.

Applicants respectfully submit that Claims 15 and 16 are clear for the purposes of 35 U.S.C. § 112, second paragraph, especially in light of the description on page 24 (line 22) through page 27 (line 16), and the amendment made to Claim 15. More specifically, Claim 15 relates to a magnetoresistive sensor including a multilayer current perpendicular to the plane structure (i.e., a CPP structure) with a magnetoresistive film of a thickness larger than the film thickness that provides a maximum resistance change rate or resistance change amount in the case of passing a current in an in-plane direction (i.e., as in a CIP structure). In other words, the present invention is a CPP structure with a film thickness larger than the

film thickness for maximum resistance change rate or maximum resistance amount for a CIP structure. Accordingly, Applicants respectfully submit that the language of Claim 15 is clear, and withdrawal of this §112, second paragraph, rejection of Claim 15 is respectfully requested.

The Examiner rejected dependent Claim 16 under §112, second paragraph, for including an allegedly redundant feature to a feature found in associated independent Claim 15. Applicants respectfully disagree. Claim 15 relates to the total thickness of the magnetoresistive film. On the other hand, Claim 16 relates to the thickness of a single layer of the magneto-resistive film. More specifically, Claim 16 defines that the magnetoresistive film includes at least the following layers -- a free ferromagnetic layer and a pinned ferromagnetic layer. Claim 16 then further relates to the thickness of the free ferromagnetic layer and/or the pinned ferromagnetic layer. Accordingly, Claim 16 is not redundant to Claim 15, and Claim 16 properly further defines Claim 15. Therefore, withdrawal of the §112 rejection of Claim 16 is respectfully requested.

Claims 1-8 were rejected under 35 U.S.C. §112, second paragraph, apparently because they referred back to Claim 15, which was also the subject of a §112, second paragraph, rejection. In light of the remarks above referring to Claim 15, Applicants respectfully request the withdrawal of the §112 rejection of Claims 1-8.

Claims 15, 16 and 1-8 stand rejected under 35 U.S.C. §103 as being unpatentable over United States Patent No. 6,707,649 to Hasegawa et al. in view of United States Patent No. 6,636,392 to Ito et al. Applicants respectfully traverse this rejection.

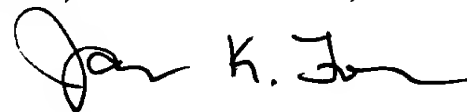
Applicants respectfully submit that neither the Hasegawa et al. reference nor the Ito et al. reference qualify as prior art against the current application. The United States filing dates of both Hasegawa et al. and Ito et al. are after the United States filing date of the present application. More specifically, the United States filing date of the present invention is March 28, 2001, while that of the Hagesawa et al. March 20, 2002 and that of Ito et al. is July 6, 2001. Accordingly, Applicants respectfully submit that Hagesawa et al. and Ito et al. do not qualify as prior art against the above-named application. Therefore, Applicants respectfully request the withdrawal of this §103 rejection of Claims 15, 16 and 1-8.

For all of the above reasons, Applicants request reconsideration and allowance of the claimed invention. Should the Examiner be of the opinion that a telephone conference would aid in the prosecution of the application, or that outstanding issues exist, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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